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Received: from gatekeeper.fcc.gov (internet.fcc.gov [165.135.0.254]) by spectrum.fcc.gov (8.6.5/8.6.5) with SMTP id  
From-WP: dewayne@tetherless.com  
To-WP: <MMARCUS@fcc.gov>  
Received: by gatekeeper.fcc.gov (5.65/DEC-Ultrix/4.3)  
id AA23204; Sat, 5 Nov 1994 09:14:11 -0500  
Received: from odo.fr.tetherless.com(199.182.106.20) by gatekeeper via smap (V1.0mjr)  
id sma023202; Sat Nov 5 09:14:03 1994  
Received: from [198.69.183.148] ([198.69.183.148]) by odo.fr.tetherless.com (8.6.9/8.6.9) with SMTP id GAA08515 f  
X-Sender: dewayne@odo.fr.tetherless.com (Unverified)  
Message-Id: <v02110106aae134189958@[198.69.183.148]>  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"  
Date: Sat, 5 Nov 1994 06:13:13 -0800  
To: MMARCUS@fcc.gov (Marcus, Michael J )  
From: dewayne@tetherless.com (Dewayne Hendricks)  
Subject: Wireless and American Dreams

Doc-93-61

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Mike:

This was posted to the com-priv list on Friday. I thought that you would like to see it. Note that it was copied to Tom Kahlil and Mike Nelson at the White House.

Best,  
-- Dewayne

>From: dave@oldcolo.com (Dave Hughes)  
>Subject: Wireless and American Dreams  
>To: com-priv@psi.com (compriv)  
>Date: Fri, 4 Nov 1994 20:40:21 -0700 (MST)  
>Cc: tkalil@arpa.mil, mnelson@ostp.eop.gov  
>Mime-Version: 1.0

>

>

> The FCC auctions, and the assumptions behind it, were very  
>\*much\* on my mind when, yesterday in tiny snowy Center, Colorado's  
>school building, I gave my pair of Metricom Wireless Ricochet modems  
>a couple of real-world tests.

> I had set up the HiCom system the district bought from us  
>(OS2 486, Lora BBS, TCP/IP, our code) in a classroom without phone  
>lines, where 'Special Ed' teacher Jim and one-armed Valley native  
>Elementary Teacher Jim tried to absorb all that I had to show them  
>to operate the system. Already named 'Center Online.'

> In order to test the ports, demonstrate potential, and maybe  
>make a little history, I accessed the BBS the first time once it was  
>up, from across the room, wireless, for the first new-user login.

> Then, as young special education students passed by the  
>machine, overwhelmingly Hispanic (80% of the school/community is  
>Hispanic, and almost the same percentage eligible for school lunches  
>such is the poverty in that part of the valley) I grabbed one bright  
>eyed little boy - Valentin Villasenor - and invited him to log-in as  
>the first 'student' to do so. He did, slowly but surely, only taking  
>a long time figuring out what secret 'password' to enter. (we raised  
>the time-out for login from 10 to 15 minutes after watching him  
>look, ponder, think and then try). And he entered a message, in  
>lower case English, to his teacher asking if he could go to lunch  
>now. Dennis answered yes by replying to his message. Which he then  
>got by subsequent login. The first BBS 'exchange' in Center.

> So as we all, some teachers, and a whole large roomful of  
>little students ate lunch, I asked where the 'closest' telephone was  
>to the Special Ed room where the early development of the BBS  
>(menus, sections, look and feel, Spanish and English) will take  
>place. Turns out to be in the kitchen itself.

> So, after configuring the TCP/IP Slip capabilities of the

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>system, I put one of the wireless modems on COM1 of the 4 ports on  
>Center Online, and we went down to the kitchen where the washing  
>machines were roaring, the staff was cleaning up after feeding some  
>600+ students, K-12. And after politely asking permission of the  
>lady who operates the food service with an firm hand, if we could  
>use her phone for a test, we hooked up a Supra 28.8 modem to the  
>wall plug which had, a little home-made (installed) supplemental  
>RJ-11 outlet by the phone jack. Then with a modem cable with a 9 pin  
>gender bender to connect the two 9 pin female plugs to each other at  
>the Wireless modem end, and a null adapter to connect the other end  
>to the phone modem, we turned them both on and went back to the  
>Special Ed room to connect.

> In less time than it takes to write about it, we had run the  
>SLIPTERM, connected to the remote wireless modem, told the phone  
>modem to dial the local-dial number of Colorado Supernet's terminal  
>ports in Alamosa, 40 miles away, I logged on with my own Slip  
>account, and we were up on the Internet!

> All the pieces worked, and would work, so that the remote,  
>rural, poor-area, Center school, would soon be up fully on the  
>Internet at a monthly cost of about \$300 a month, 24 hours a day,  
>bidirectional.

> Then the wireless modem showed yet \*another\* possibility  
>that had not occurred to me when I first got there.

> The school will gladly bring two new phone lines to the room  
>where the system is. One for 24 hours SLIP connection to the  
>Internet, (which our experience shows can be used by at least 8  
>people simultaneously who are logged into the BBS by lan, serial  
>line, or modem dial in). The other will be for 'community' access,  
>including students and teachers at home. But only one line.

> BUT, as it turns out, there are at least 8 other  
>administrative, kitchen, teacher lounge, etc phones in the school  
>buildings within Ricochet modem range of BBS-Server. None of which  
>are in use after about 4PM week days, nights, weekends, and all  
>summer and vacation times. What if, I asked Superintendent, Gary  
>Kidd, (who is \*really\* committed to improving this desperately  
>backwater school with technology) he bought through us, several  
>'pairs' of Ricochet modems (currently at \$1000 a pair, but  
>hopefully at lower cost) and with one 14.4 modem (maybe \$125) per  
>pair, and connected all of those existing phones, wireless, to  
>2,4,6,8 - whatever - terminal ports on Center Online.

> So that, with only two 'dedicated' new phone lines for the  
>BBS, only one of which is for outside modem dialin, they get, late  
>afternoons, nights, weekends, up to 8 OTHER incoming access lines at  
>NO additional monthly telephone cost - so that as many teachers and  
>students as possible can log in - and, as needed, go out to the full  
>Internet, from outside the school. Using loaner laptops where  
>necessary, or from one or more in the tiny 'community' library, OR,  
>tiny city hall, or other public places. Or from the community  
>Catholic, and/or Baptist, or Methodist churches who admirably serve  
>the community now. (and who are being taught by Noel Dunne, of La  
>Cocina, how to 'go online')

> Or, if I can get a pole-top antenna that can cover the  
>small town which is no more than a half mile across, by loaner  
>wireless for some of the kids with no phones at home. \*Lots\* of the  
>students have no phones at home. When young Valentin logged onto  
>Center Online the first time, the registration software asked him  
>for his 'home phone number' he looked at me and said "We don't have  
>a phone." So we had him enter the school's phone number - the only  
>telecommunications link with the outside world he is likely to have  
>for a long time, perhaps all through school years. Unless he can use  
>no-comm-cost wireless.

> And then Valentin can do his homework, access the world,  
>communicate with other kids and, above all, let them read and write  
>in English - which is the crying requirement now. As 40% of the

>school's 700 kids either can speak, read, write ONLY in Spanish, or  
 >have such limited English skills, that the school district came  
 >under court order to do a better job in getting kids in those  
 >categories up to general educational speed in the dominant language  
 >of the country. (But they can't find, or attract enough bi-lingual  
 >teachers!)

> Reading-writing online may be \*the\* most dramatic thing  
 >they can do to improve things!

> So in \*innumerable\* ways, no-licence, no-comm-cost wireless  
 >can/will go to the HEART of Center's problem of education, both  
 >economically and pedagogically, of community learning/teaching,  
 >economic development, and social outreach, (you cannot \*believe\*  
 >just how socially isolated those kids are. As I listened to stories  
 >by one white school board woman member who, when sitting with some  
 >of the 14-15 year old Hispanic girls, they asked her when did she  
 >have her first baby. When she told them she was 30, they exploded in  
 >disbelief, one girl saying "you were old! You must have been past  
 >menopause. NOBODY has kids that old!")

> Because those girls are pregnant at 14-16, many  
 >deliberately so to get welfare checks so their family can eat. They  
 >know so little of what goes on elsewhere. And many simply have  
 >already lost any dream, or vision, of going anywhere, except 'the  
 >valley.' From which few, including boys, leave. And instead drop  
 >out. Of 40 who were tracked from 9th grade, 17 graduated. And two of  
 >them, girls, were pregnant. And the girls - even the brightest ones  
 >- indignantly ask "Why should we waste time here in school when we  
 >could be making \$5 an hour in the lettuce fields?"

> They may be already lost. But those tiny tots with black  
 >eyes and brown skins that marched past me in the lunch room, are  
 >not. And they, like Valentin Villasenor, can go online before their  
 >dreams are crushed, or empty of possibilities because they simply  
 >have no concept of what is possible to them that they learn through  
 >technologies that can link them to the rest of the world.

> Even if they have to be taught by white teacher, co-Sysop  
 >Jim who has to operate the computer with one hand, and the claw that  
 >is his other arm. (life is tough in the valley and can be dangerous  
 >on the farms), and who doesn't handle Spanish that well as he walks  
 >into the Elementary computer room, equipped with 22 Apple II's,  
 >networked, where even MECC can't provide enough relevant software by  
 >disk. But the kids will be reading/writing. In English - as each  
 >line on the Menu contains both languages. 'Center School - Escuela  
 >- Online'

> Yep. Center is where the NII is at, for me. Solve their  
 >problems, or even make serious inroads with telecom that is  
 >affordable and accessible - which just two days in the Valley showed  
 >me can be done with public-spectrum wireless as an extension to the  
 >slim POTS phone 'infrastructure' and the stated Administration  
 >policy of 'Universal Access' can become an American Reality.

> But wait for high-end, fiber-optic, cable, Mosaic,  
 >'trickle down' and we will NOT achieve that social goal which  
 >everybody mouths, but few seem to practically support. ('Let em eat  
 >ASCII.')

> Yeah, even with spread spectrum Part 15 wireless, it will  
 >be a long ways to answer that girl's question "What has all this got  
 >to do with the lettuce fields?"

> But I am already past the issue of access. With wireless.  
 >So all of us can tackle the really \*tougher\* question in Center  
 >terms, of how to turn those kids skepticism into dreams, their fun  
 >connecting into language skills, their latent talents into  
 >accelerated development, and for some - outright careers from the  
 >Valley.

> It was cold as hell and snowing and foggy when I went  
 >over deserted Poncha Pass at night on the 180 mile drive home from  
 >the San Luis Valley. Listening to how another mother named Smith who

>lost it, tried to solve \*her\* problems.  
 > So I ask again. What the hell is Reed Hundt's email  
 >address? I got a little kid named Valentin, and a school  
 >Superintendant named Kidd in Center, Colorado, who have some  
 >questions to ask him about an auction.  
 > But Hundt had better brush up on his Spanish, before  
 >answering young Valentin. And have some pretty damned good answers  
 >for Kidd as to why he should be forced to buy the wireless access he  
 >now has free.  
 >  
 >Dave Hughes  
 >  
 >P.S. When I called Superintendent Kidd today at 2 PM to get the  
 >correct spelling of young Valentin's name, he called me back and  
 >said "Guess what? When I went into the Special Ed room to get his  
 >name from Dennis, there was Valentin sitting at the computer working  
 >away by himself even though we released all the kids at noon today.  
 >They couldn't tear him away from it!"  
 >  
 >Maybe the dreaming has already started.  
 >  
 >  
 >So the only type of school 'reform' that makes sense to me is  
 >already happening in Center, with Valentin Villasenor. Who doesn't  
 >have a phone, but can sure use a wireless modem.  
 >  
 >P.P.S And apropos the Bill Frezza's kid's school problem-with-the  
 >Internet, it only took me 5 minutes to demonstrate to the teachers  
 >that, by putting the 'Lora BBS as their Front End to the Internet'  
 >right at their class level, THEY could decide what was appropriate  
 >access to the Internet for those too young to make good decisions,  
 >and THEY could program the menus to suit their goals, but limit it  
 >appropriately. And not with any \$20,000 box either. But just the  
 >functionality that comes with any good Fido BBS.  
 >  
 >Rather than argue the idiotic assumptions made elsewhere that 'going  
 >on the Internet' is an all or nothing matter, and that all students  
 >should or should not be given 'raw' high end access.  
 >  
 >i.e. put School Internet access 'power' where 'responsibility' lies.  
 >With the accountable teacher. Not even the Network Center Tech. Or  
 >some committee.  
 >

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